



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW1923G-A BYPASS RATIO: 11.2  
 UNIQUE ID NUMBER: 01P20PW190 PRESSURE RATIO ( $\pi_{co}$ ): 37.7  
 COMBUSTOR: TALON X, Block-C  
 ENGINE TYPE: TF RATED THRUST ( $F_{oo}$ ) (kN): 105.9

REGULATORY DATA

**\*\* DATA SUPERSEDED \*\* SEE FOLLOWING UID FOR REVISED DATA: 04P20PW203**

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>oo</sub> (g/kN) or SN	0.3	26.1	39.4	4.0
AS % OF ORIGINAL LIMIT	2.0	22.0	34.0	17.0
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			43.0	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			48.0	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			53.0	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			60.0	

For non-volatile particulate matter (nvPM) emissions, please refer to the ICAO Engine nvPM Emissions Data Sheet.

DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
 x DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 - OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

MEASURED DATA

MODE	POWER SETTING (%F <sub>oo</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	0.760	0.00	0.00	24.20	3.1
CLIMB OUT	85	2.2	0.630	0.00	0.00	19.30	1.8
APPROACH	30	4.0	0.220	0.10	2.30	10.20	0.8
IDLE	7	26.0	0.070	0.10	18.40	5.70	0.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			285	19	2256	3599	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>oo</sub> (g/kN) or AVERAGE SN (MAX)				0.2	21.3	34.0	3.1
SIGMA (D <sub>p</sub> /F <sub>oo</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>oo</sub> in g/kN, or SN)				0.1-0.3	21.1-21.5	33.7-34.2	2.7-3.9

ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	102-103.3
TEMPERATURE (K)	272-278.1
ABS HUMIDITY (kg/kg)	0.00122-0.00221

FUEL

SPEC	Jet A
H/C	1.94
AROM (%)	17.8-18.4

MANUFACTURER: Pratt & Whitney  
 TEST ORGANIZATION: Pratt & Whitney  
 TEST LOCATION: Mirabel Aerospace Centre - Quebec  
 TEST DATES: 25/03/2018-26/03/2018

NO<sub>x</sub> REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
x	2.3.2 e) (CAEP/8)

REMARKS

1. Data from Certification Report PWA-11601
2. Block C combustor
3. Certification in accordance with Part III, Chapter 2, of Amendment 8 of ICAO Annex 16 Vol. II.
4. NO<sub>x</sub> levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

Compliance with Fuel Venting requirements:

x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)